

A cross-sectional diagram of a vacuum furnace system. A central vertical chamber (6) is surrounded by a thick insulating wall (2). The top of the chamber has a flange (7a) and a hatched heating element (9a). The bottom has a flange (7b) and another hatched heating element (9b). A horizontal duct (8) enters from the left, labeled "GAS" with an arrow pointing right. It turns downward at a corner (1) and exits through a side wall (3) as "EVACUATE" with a downward arrow. Four square ports with diagonal crosses are located around the chamber: one at the top left (5a), one at the top right, one at the bottom left (5b), and one at the bottom right. Dashed lines (8a) indicate light rays entering from the left and reflecting off the interior walls of the chamber.

FIG. 2

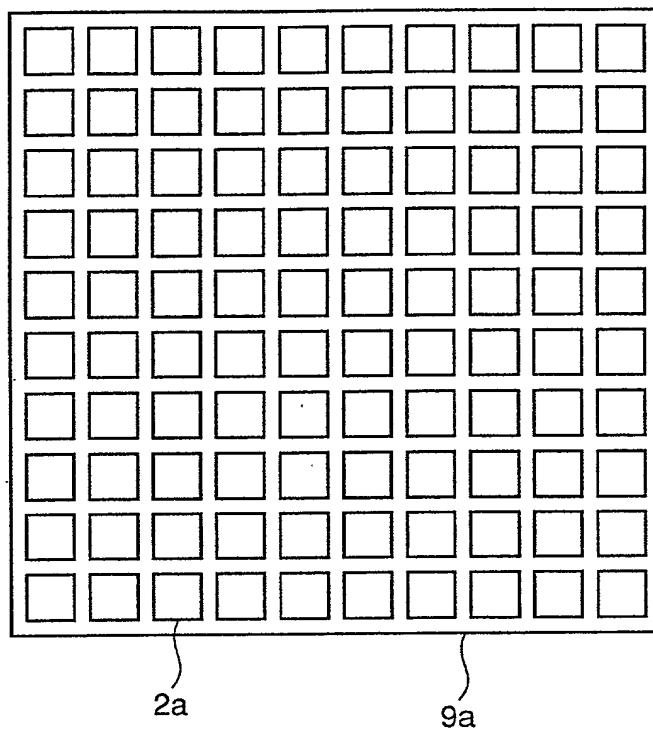


FIG. 3

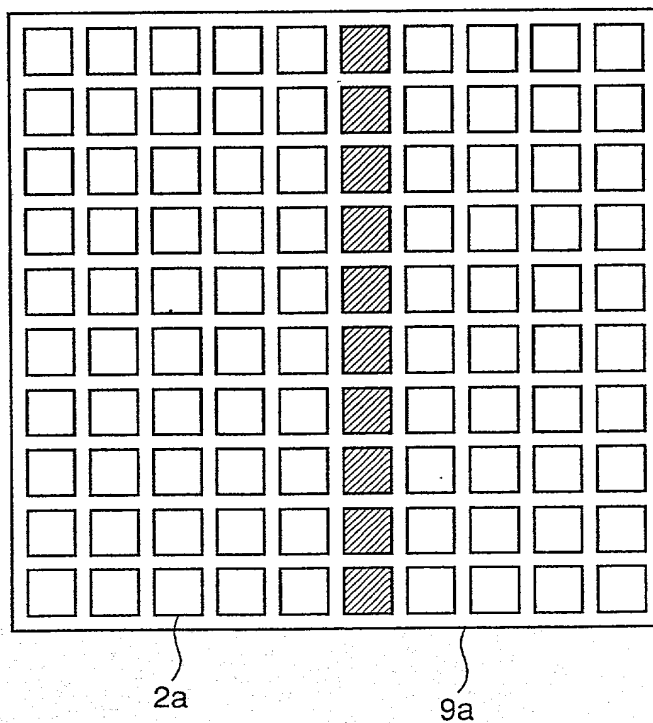


FIG. 4

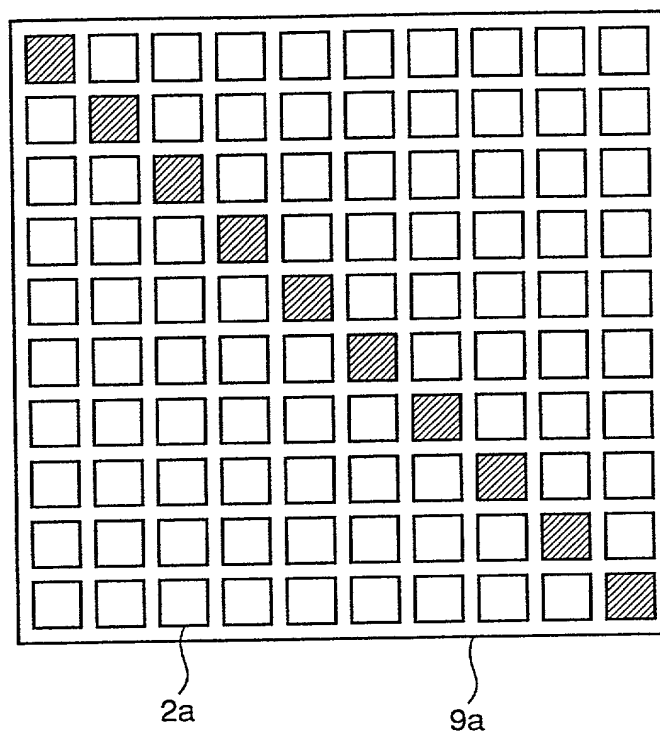


FIG. 5

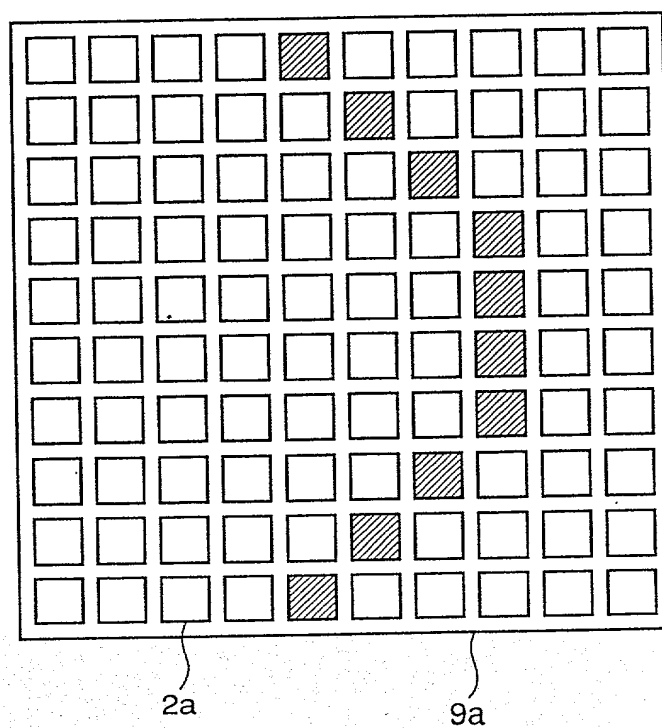


FIG. 6

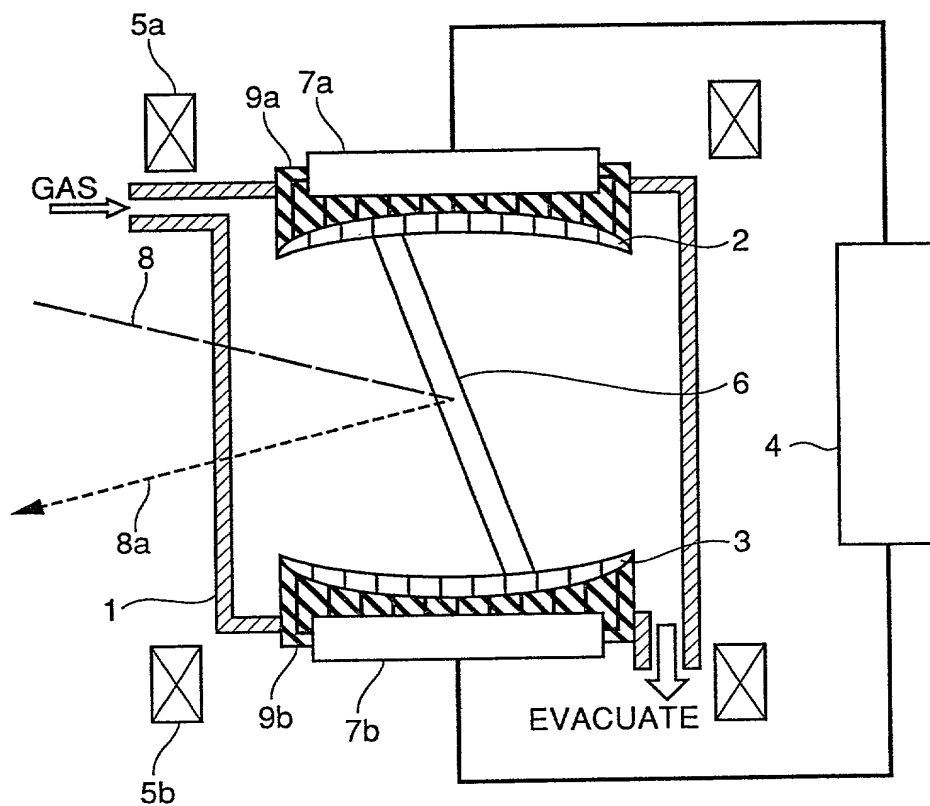
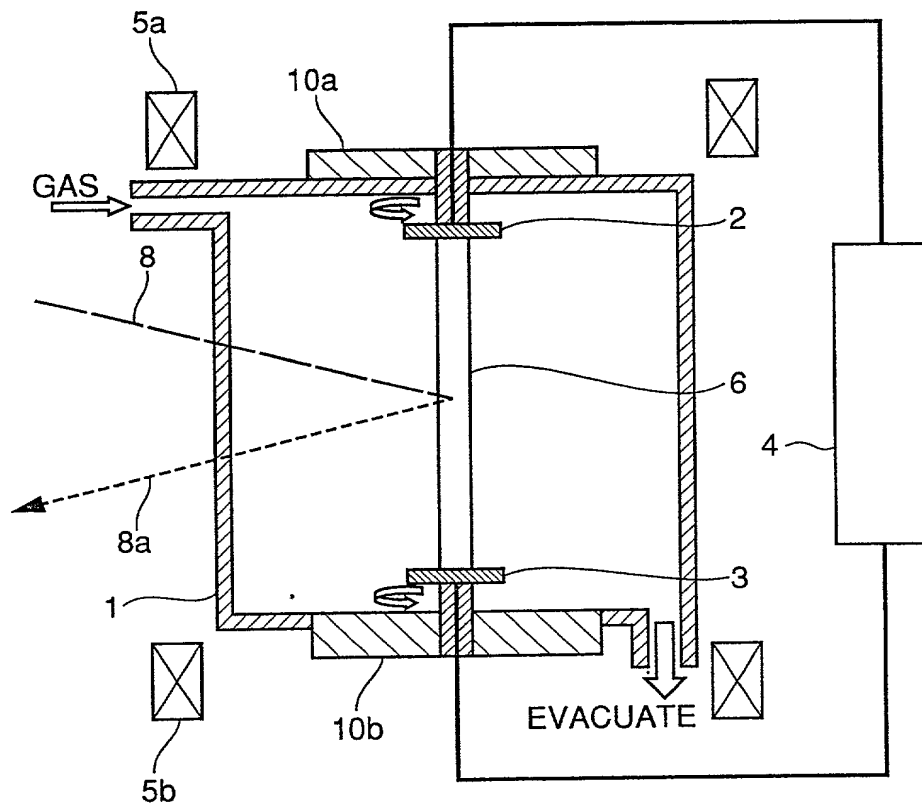


FIG. 7



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FIG. 8

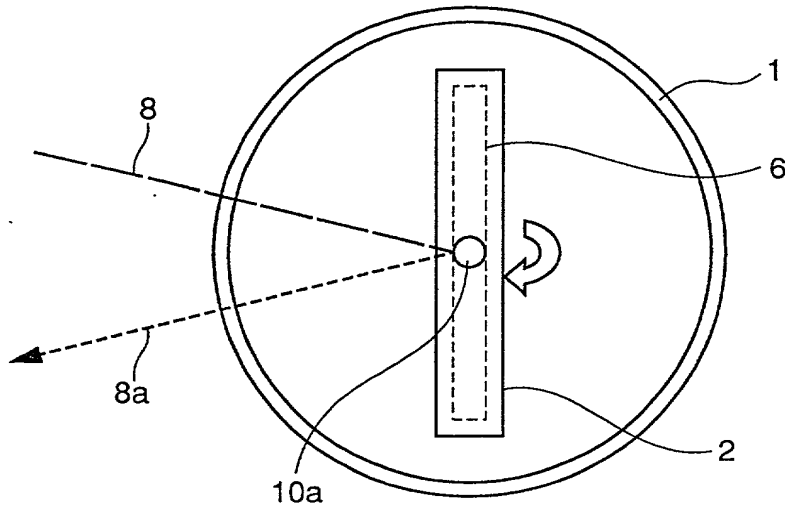
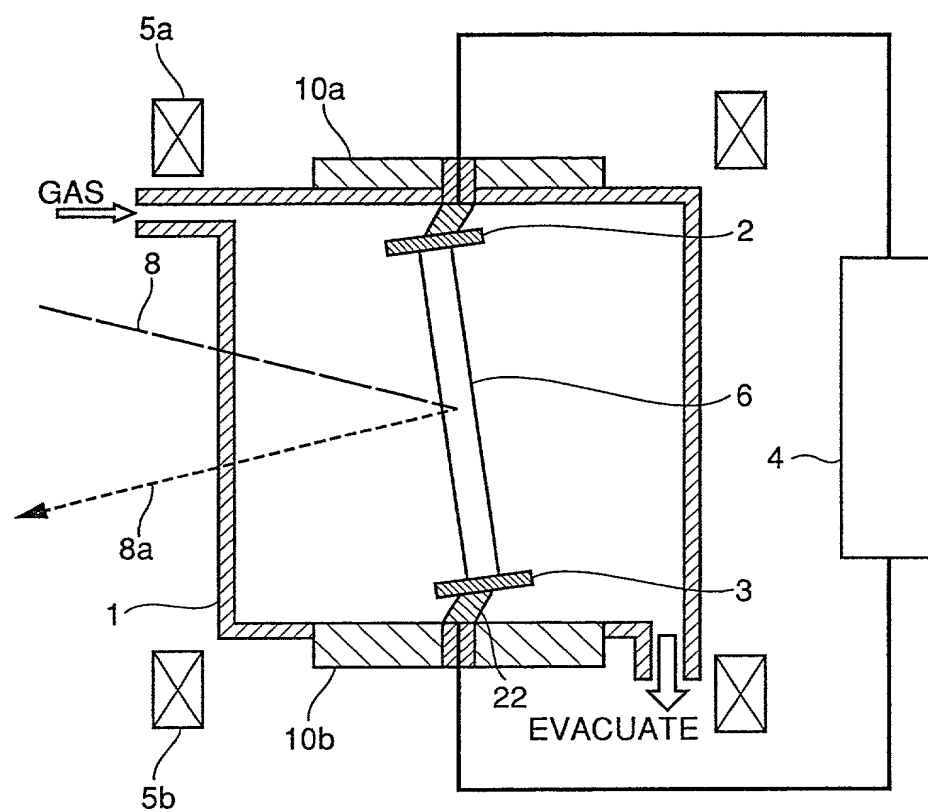


FIG. 9



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FIG. 10

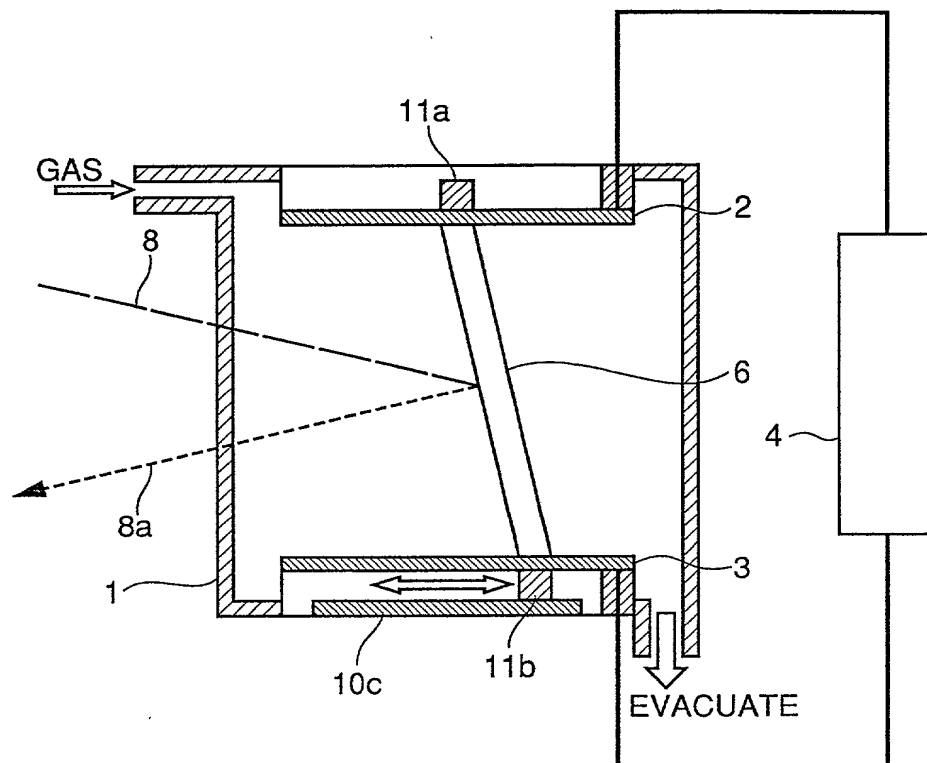


FIG. 11

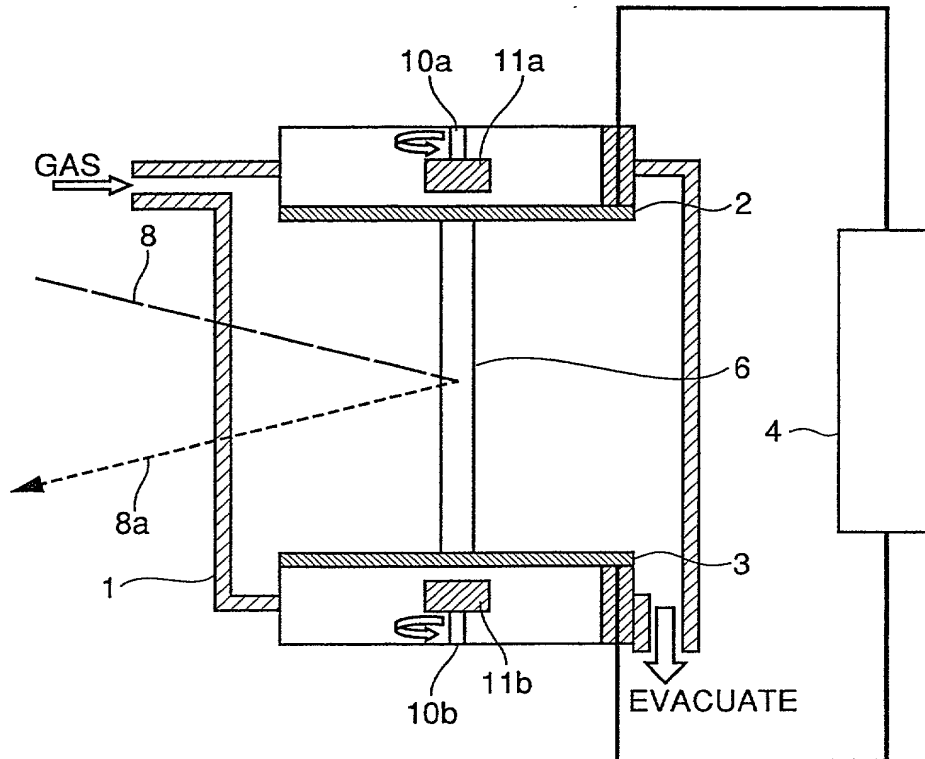
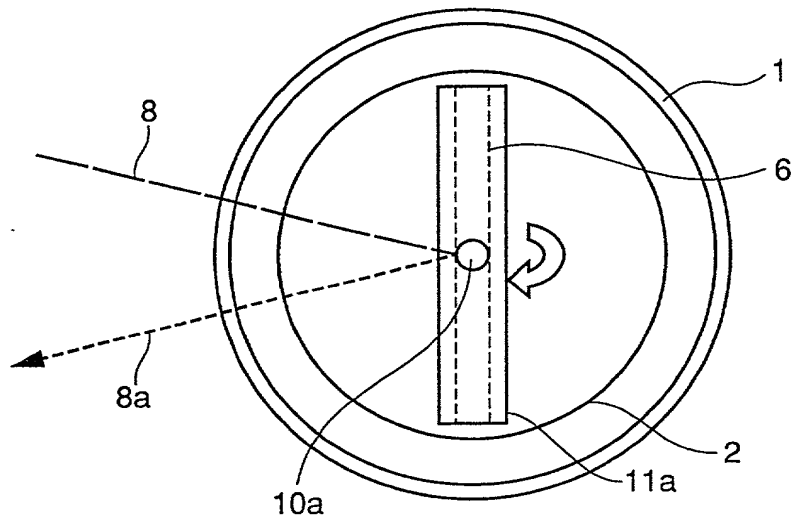
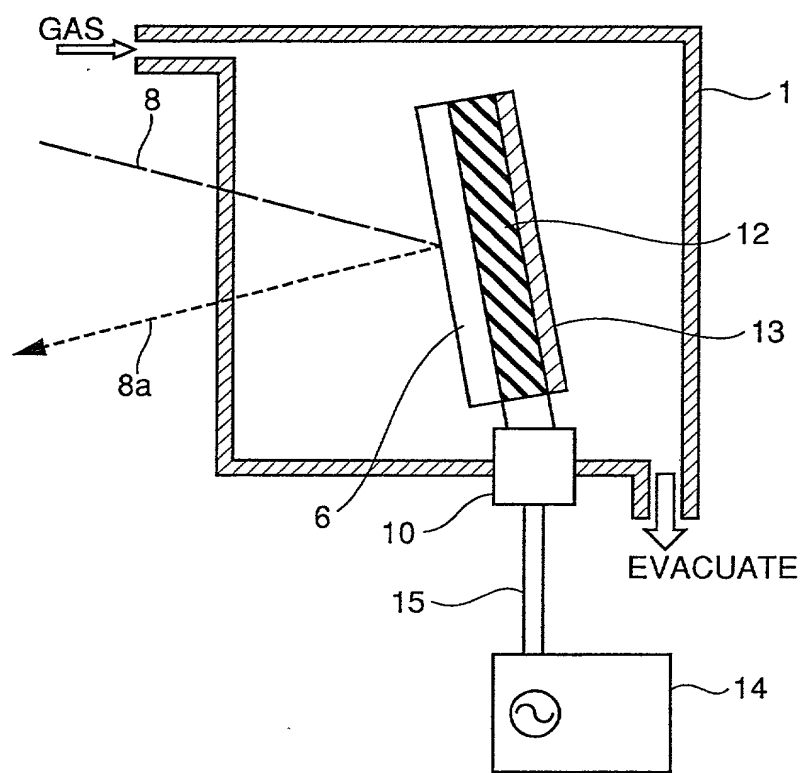


FIG. 12



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"DOT" 854860

FIG. 13



A cross-sectional view of a vacuum furnace 1. The furnace consists of a main chamber 2 and a side chamber 3. A central sample 4 is held by a heater 6a and a support 6b. Gas enters through inlet 8 and is evacuated through outlet 14. A vacuum gauge 16 is connected to the side chamber 3.

FIG. 15

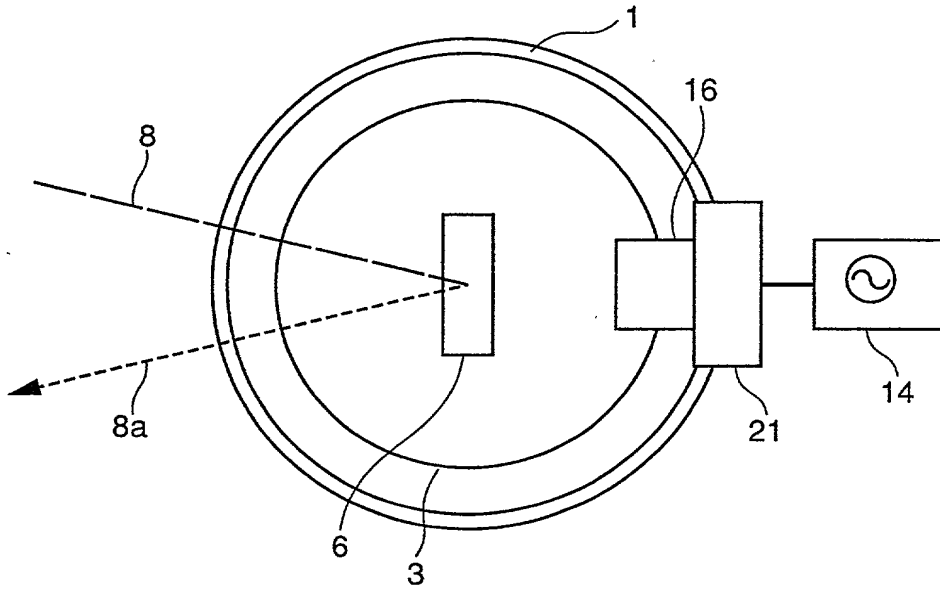


FIG. 16

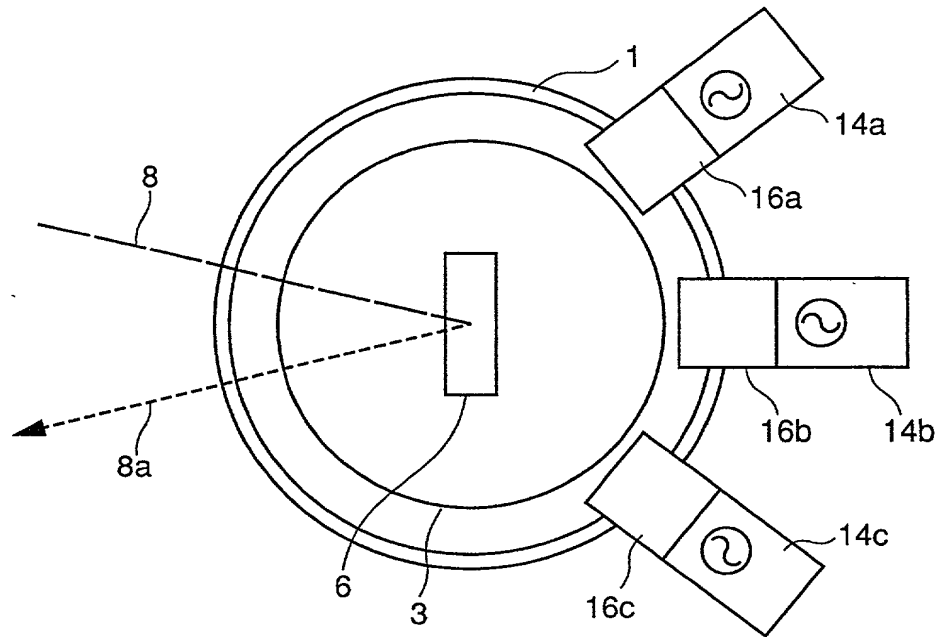


FIG. 16

FIG. 17

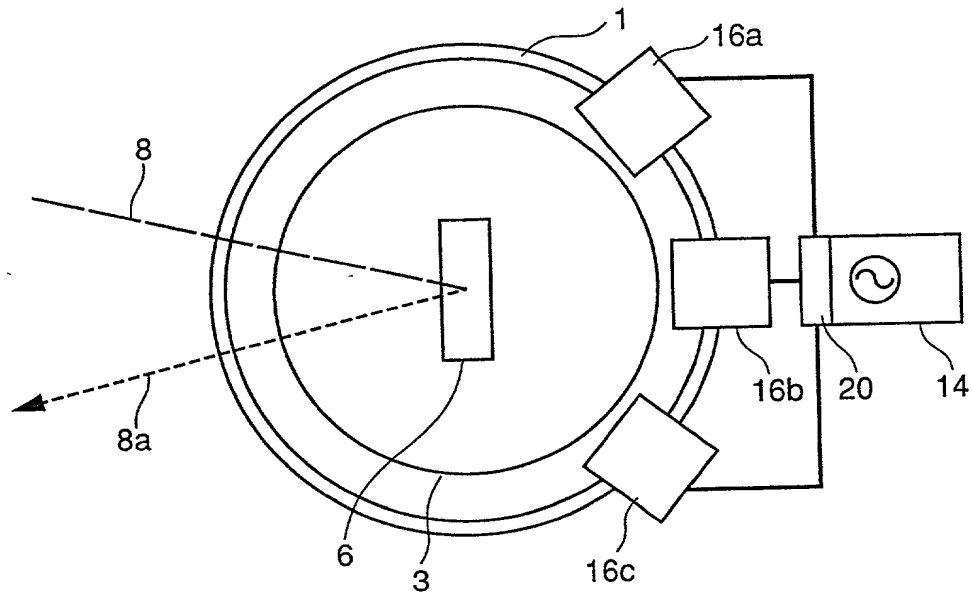
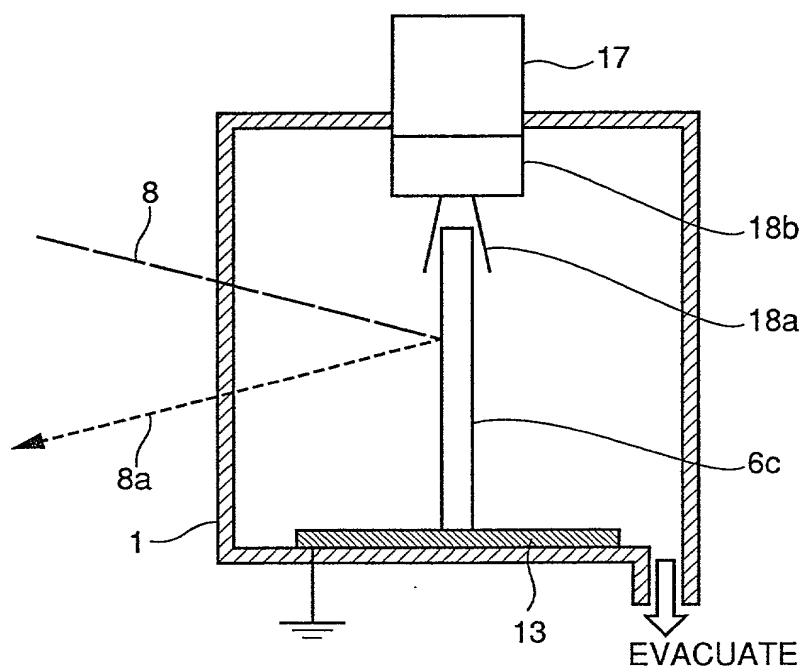


FIG. 18



A cross-sectional view of a vacuum chamber assembly. The chamber is defined by a thick-walled rectangular frame (1) with a hatched cross-section. Inside, a vertical rod (6) is mounted on a base plate (13), which is also hatched. A component (19) is positioned at the top of the rod. A dashed line (8) represents a beam or path, with a portion (8a) extending from the left side of the chamber. A ground symbol is connected to the base plate (13). An arrow labeled "EVACUATE" points downwards from the bottom right corner of the chamber, indicating a vacuum port. Labels 18a and 18b point to the interior surfaces of the chamber walls.